

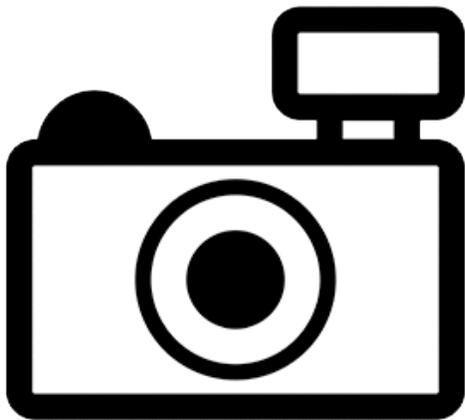
***Hypostomus luteus* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, February 2013

Revised, August 2018

Web Version, 9/13/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“South America: upper Uruguay River basin [Brazil].”

Status in the United States

No records of *Hypostomus luteus* in trade or in the wild in the United States were found.

Means of Introductions in the United States

No records of *Hypostomus luteus* in the wild in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Hypostomus luteus* (Godoy 1980) is the current valid name of this species. *Hypostomus luteus* was originally described as *Plecostomus luteus* Godoy 1980.

From ITIS (2018):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysii
Order Siluriformes
Family Loricariidae
Subfamily Hypostominae
Genus *Hypostomus*
Species *Hypostomus luteus* (Godoy, 1980)”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 40.5 cm TL male/unsexed; [Zaniboni Filho et al. 2004]; max. published weight: 762.00 g [Zaniboni Filho et al. 2004]”

Environment

From Froese and Pauly (2018):

“Freshwater; demersal.”

Climate/Range

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“South America: upper Uruguay River basin [Brazil].”

Introduced

No records of introduction were found for *Hypostomus luteus*.

Means of Introduction Outside the United States

No records of introduction were found for *Hypostomus luteus*.

Short Description

From Reis et al. (1990):

“Head covered with dermal ossifications dorsally, except for a roundish of ovate naked area on snout tip. Dorsal margin of orbit only slightly elevated, continuing in an inconspicuous ridge on posttemporal plate and on a series of scutes beginning just behind posttemporal plate (at least in larger specimens). Low ridges also present on predorsal and dorsal scutes. Usually three scutes bordering posterior margin of supraoccipital bone. Body moderately low; dorsal profile gently descending from origin of dorsal fin to end of caudal peduncle. Caudal peduncle roughly ovate in cross-section; slightly flattened ventrally. Ventral scutes of caudal peduncle somewhat expanded laterally, forming conspicuous lateral ridges in it [*sic*] lower margins, at least in larger specimens. Dorsal scutes between end of dorsal fin base and adipose fin spine flat in their dorsal portion; those closer to dorsal fin usually with a central area devoided of odontodes.

Outer face of upper lip covered with small scutelets, specially [*sic*] on lateral portions; maxillary barbel variable in size, moderately short. Teeth strong and not very numerous, with a well-developed outer cusp of about half length of inner cusp.

Body completely covered with rows of comparatively smooth scutes dorsally; moderately rough in larger specimens. Abdomen variably covered with minute scutelets; with naked areas even in larger specimens. Ventral surface of head usually completely covered with scutelets, even in smaller specimens.

Distal half of pectoral fin spine of larger specimens usually covered dorsally with somewhat hypertrophied odontodes, slightly curved anteriorly. Adipose fin spine moderately long and straight. Caudal fin margin slightly concave, with comparatively short outer rays.”

“Colour in life: small individuals up to about 80 mm SL are homogeneously greybrown pigmented dorsally, without any light marks. During growth, scattered light-yellow dots appear all over the dorsal surface and fins. As growing proceeds further to about 130 mm SL the entire caudal fin and sometimes portions of the dorsal fin become strongly yellow or yellowish orange. In medium-sized individuals unpaired fins and portions of pectoral and ventral fins become yellow. The body scutes become yellow from the caudal peduncle to the head; larger specimens

have either the posterior half or the entire body completely yellow. Tooth crowns strongly colored with orange.”

Biology

From Reis and Lima (2009):

“*H.[Hypostomus] luteus* is a demersal (living at or near the bottom of the water body) species. Found in the large and medium sized rivers with strong currents and rocky bottoms.”

Human Uses

From Reis and Lima (2009):

“The species is harvested from the wild for the international pet trade, although it is not at a level to cause a decline.”

Diseases

No records of diseases were found for *Hypostomus luteus*.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No records of introduction were found for *Hypostomus luteus*, therefore there is no information on impacts of introductions.

4 Global Distribution



Figure 1. Known global distribution of *Hypostomus luteus*. Locations are in southern Brazil. Map from GBIF Secretariat (2018).

The northernmost point was not used as a source point in the climate match. There is no collection location listed in the record information (GBIF Secretariat 2018) and it is outside the Uruguay River basin.

5 Distribution Within the United States

No records of *Hypostomus luteus* in the wild in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Hypostomus luteus* was medium for the southeastern coastal States from Delaware to Texas with a few inland patches of medium match in the Southeast. Northeastern peninsula Florida had a high climate match. The remainder of the contiguous United States had a low match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.015, medium. The range for a medium climate score is between 0.005 and 0.103. Florida, Georgia, and South Carolina had high individual climate scores.

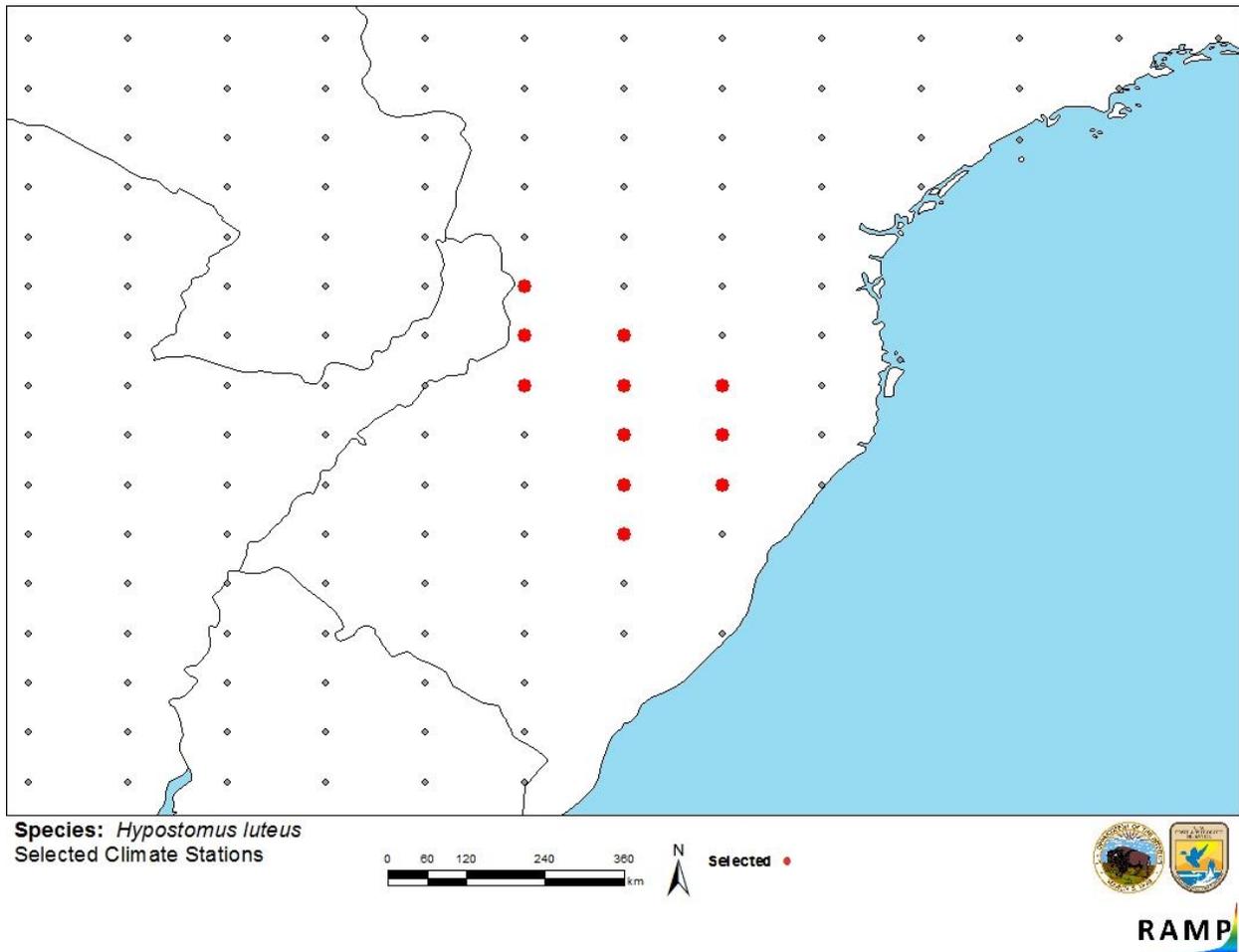


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Brazil selected as source locations (red) and non-source locations (gray) for *Hypostomus luteus* climate matching. Source locations from GBIF Secretariat (2018).

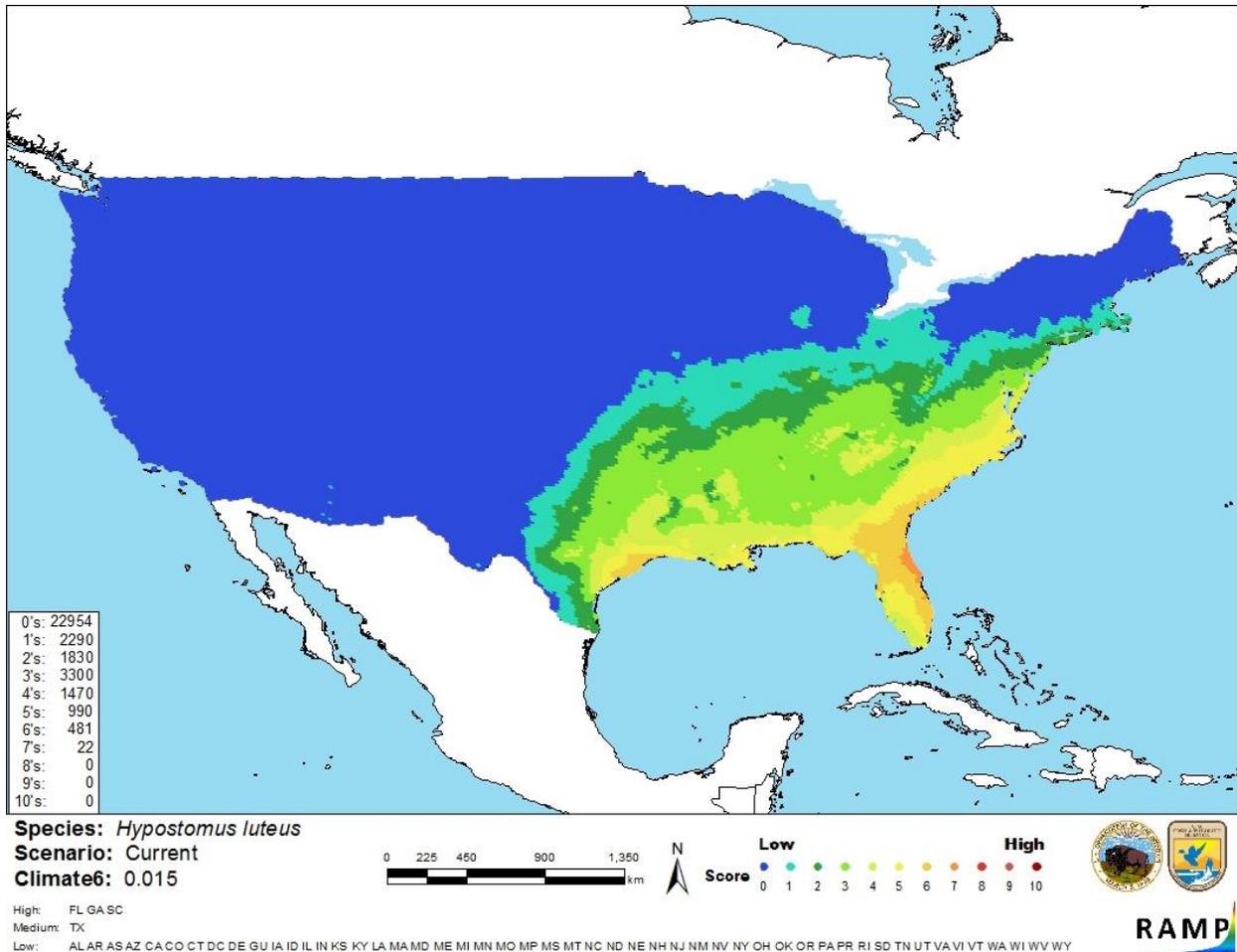


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus luteus* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

The High, Medium, and Low Climate match Categories are based on the following table:

Climate 6: Proportion of (Sum of Climate Scores 6-10) / (Sum of total Climate Scores)	Climate Match Category
$0.000 \leq X < 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

The certainty of assessment is low. There was minimal biological information available for this species. There were no records of introductions found, so impacts of introduction are unknown.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Hypostomus luteus is a member of the suckermouth armored catfish family (Loricariidae), native to Brazil. It is harvested for the international pet trade, but does not appear to be in trade in the United States. The history of invasiveness is uncertain. No records of introductions were found. The climate match was medium for the contiguous United States with Florida, Georgia, and South Carolina having high individual climate scores. The certainty of assessment is low due to lack of information; the overall risk assessment category is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Medium**
- **Certainty of Assessment (Sec. 7): Low**
- **Remarks/Important additional information:** No additional information.
- **Overall Risk Assessment Category: Uncertain**

9 References

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 10.

Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2018. Catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (August 2018).

Froese, R., and D. Pauly, editors. 2018. *Hypostomus luteus* Gody, 1980. FishBase. Available: <https://www.fishbase.de/summary/Hypostomus-luteus.html>. (August 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Hypostomus luteus* (Godoy, 1980). Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/5202268>. (August 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Hypostomus lutes* (Godoy, 1980). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680196#null. (August 2018).

Reis, R., and F. Lima. 2009. *Hypostomus luteus*. The IUCN Red List of Threatened Species 2009: e.T167707A6370824. Available: <http://www.iucnredlist.org/details/167707/0>. (August 2018).

Reis, R., C. Weber, and L. R. Malabarba. 1990. Review of the genus *Hypostomus* Lacepède, 1803 from southern Brazil, with descriptions of 3 new species (Pisces, Siluriformes, Loricariidae). *Revue Suisse de Zoologie* 97(3):729–766.

Sanders, S., C. Castiglione, and M. Hoff. 2018. Risk assessment mapping program: RAMP, version 3.1. U.S. Fish and Wildlife Service.

10 References Quoted But Not Accessed

Note: The following references are cited within quoted text within this ERSS, but were not accessed for its preparation. They are included here to provide the reader with more information.

Godoy, M. P. de. 1980. Poluição -- peixes e pesca; reconhecimento preliminar com descrição de duas espécie novas de peixes, Rios Uruguia, Pelotes e Aprine, aproveitamentos de Ita e de Machadinho, o impacto da ação do homem sobre a natureza Florianopolis (Eletrosul).

Zaniboni Filho, E., S. Meurer, O. A. Shibatta, and A. P. de Oliverira Nuñer. 2004. Catálogo ilustrado de peixes do alto Rio Uruguai. Florianopolis : Editora da UFSC : Tractebel Energia.